

TRANSMITTAL LETTER

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February 29, 2016

Bureau of Land Management
Las Cruces District Office
Copper Flat Copper Mine Project
Attention: Doug Haywood - Project Manager
1800 Marquess Street
Las Cruces, New Mexico 88005

Dear Mr. Haywood,

I regret that you have failed to withdraw the Draft Environmental Impact Statement (DEIS) for the Copper Flat Copper Mine as I formally requested in my December 16, 2015 statement at the public meeting in Hillsboro on this DEIS. This DEIS, as structured, has denied me the opportunity to participate in the review of a Draft Environmental Impact Statement for the subject project. The DEIS does not provide a base case which is the proposed action plan for the project and a set of alternatives to consider, evaluate, and provide comments on, as required by statute and regulation. In failing to define Alternative Two as the real proposed action plan for the project you have systematically denied me the opportunity to review a fully articulated set of alternatives, sets of data, and analysis to review and comment about.

As stated at that time, I find the DEIS to be categorically deficient both in substance and methodology. I sincerely hope that you will honestly and competently consider the following comments, doing so can only improve the document.



Robert Barnes
P.O. Box 252
Hillsboro, New Mexico
88042

Draft Environmental Impact Statement
Copper Flat Copper Mine
BLM/NM/ES-16-02-1793

Comments Presented by

Robert A. Barnes
P.O. Box 252
Hillsboro, New Mexico 88042

Submitted by US Mail to: BLM Las Cruces District Office, Copper Flat Copper Mine Project, Attention: Doug Haywood - Project Manager, 1800 Marquess Street, Las Cruces, New Mexico 88005; and by e-mail to BLM_NM_LCDO_Comments@blm.gov

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ABSTRACT: The numerous, and notable, deficiencies of the Copper Flat Copper Mine DEIS, fall within the twin categories of substance and methodology. This is a rare case, generally a document of this type - if it is poorly done - will be deficient in one or the other categories, but not both. Therefore, for each of the comments below I will explain the deficiencies as they have occurred in each category. Unless otherwise indicated, page and table numbers refer to Volume One of the DEIS. The documents footnoted in the body of these comments are provided in the Appendix.

SECTION ONE: WRITTEN AND VERBAL COMMENTS PROVIDED AT THE PUBLIC MEETING AT HILLSBORO, NEW MEXICO ON THE COPPER FLAT MINE DRAFT ENVIRONMENTAL IMPACT STATEMENT BY ROBERT A. BARNES ON 12/16/2015.

My name is Robert Barnes. I am a resident of Hillsboro, New Mexico and as such I am directly affected by the mining proposal made by THEMAC.

Given the limited amount of time made available for review of the draft Environmental Impact Statement my assessment of the document has been cursory. My statements at this forum are, therefore, general. More specific statements are being published on The Black Range Rag and will be provided to you in the formal comment process.

For many years I worked for years in policy and program arenas which required the use of NEPA mandated, and other public involvement, processes. I can say two things about those processes with a great deal of authority: 1) they are a pain in the ass; and 2) when done well the resulting decisions are significantly better than they would have been absent those processes.

Having sat on your side of the table, or at least watching my staff sit on your side of the table for years I have an appreciation of the political pressures you are under, I can appreciate the organizational culture which you work in, and I can appreciate that you may have limited capability to deal with complex issues.

The National Environmental Protection Act was not enacted to save the environment, it was enacted to protect the interests of the American people when they are faced with the well-financed and greedy aspirations of national and international corporations. NEPA, its implementing regulations, and various agency guidelines and procedures are designed to assure the availability of the best information possible in the decision making process.

This document fails in that regard. The methodologies, data sets, analytics, and conclusions of the parts of the report which I have reviewed - primarily the Surface Water Use, Groundwater Resources, and Socioeconomics sections are categorically deficient. The errors are rampant. Groundwater recharge is miscalculated because

of fundamental flaws in basic assumptions; assertions of clay bed permeability given changing water gradients are unsubstantiated; the Region of Influence in the Socioeconomics section is inappropriately determined because the report fails to consider that copper prices and copper production function as standard commodities, responding to supply and demand in a fairly straight forward manner - meaning that Sierra County's gain is Grant County's loss and that out of all of this the tax revenue for New Mexico may not be any different than it already is; the misunderstanding of this area's economics and in particular the role of substantial business and tax revenues being generated by a stable, prosperous, and well-educated retirement community - a source of stable long-term funding for the county which is placed at risk by a large industrial complex being placed in an area people have sought out because of its tranquility leads to grossly erroneous economic conclusions; the sources of various data sets appear to be drawn from the press releases of the interested parties - an assessment of the Spaceport, for instance, fails to take into consideration the substantial taxes paid by the people of this region to construct the facility - not new money, redirected money, money which the people of the area could have used for different purposes.

In short, this document is substantively sophomoric, the document should be withdrawn and completely reworked because it is not fit for review.

Thank you.

Robert A. Barnes
December 16, 2015
Hillsboro, NM

SECTION TWO: ADDITIONAL COMMENTS PROVIDED ON FEBRUARY 29, 2016

COMMENTS ON CHAPTER 2 PROPOSED ACTION AND ALTERNATIVES

The subject DEIS fails to establish credible proposed actions and alternatives for analysis as required by Statute and Enabling Regulations.

In December of 2010, the New Mexico Copper Corporation (NMCC), acting for the Canadian Company THEMAC, submitted a Plan of Operations (MPO) for their proposed mine at the Copper Flat facility east of Hillsboro in Sierra County, New Mexico. They revised that plan in June of 2011. (page: abstract at front of DEIS)

On January 9, 2012 BLM published a Notice of Intent to prepare an EIS in response to the MPO. (p. ES-1) A Scoping Process to determine the parameters of the EIS was conducted between January 9, 2012 and March 9, 2012. (p. ES-2)

Federal Law requires that a Purpose and Need Statement be articulated in an EIS. BLM identified its Purpose and Need as follows:

"The purpose of the BLM in relation to the proposed project is to manage the mineral resource within the Copper Flat mine to best meet the present and future needs of the American people in a balanced manner and to take into account the long-term sustainability of other resources and resource uses.

The need for the BLM to authorize this project is established under the General Mining Law of 1872, as amended. Under this law, persons are entitled to reasonable access to explore for and develop mineral deposits on public domain land. As the Federal agency responsible for managing mineral rights and access on certain Federal land, the BLM must ensure that NMCC's proposal complies with BLM Surface Management Regulation (43 CFR 3809), the Mining and Mineral Policy Act of 1979 (as amended), and Federal Land Policy and Management Act of 1976." (p. ES-3)

The requirement to comply with other Federal Laws was not identified as a need in the DEIS.

Federal Law requires that BLM describe the Proposed Action evaluated by the EIS and Alternatives to the Proposed Action.

1. The Proposed Action identified in the NMCC submittal of 2011 described a mining operation which would process 17,500 tons of ore per day. (p. ES-4) This is the Proposed Action in the DEIS.
2. During 2011 and 2012, NMCC, identified an alternate plan of operations and this became Alternative 1 in the DEIS, it described a mining operation which would process 25,000 tons of ore per day. (p. ES-4)
3. During 2013, NMCC identified another alternate plan of operations and this became Alternative 2 in the DEIS, it described a mining operation which would process 30,000 tons of ore per day. (p. ES-4) In a public meeting held in Hillsboro on December 16, 2015, BLM identified this Alternative as the one preferred by THEMAC/NMCC, and it is listed as BLM's Preferred Alternative in the DEIS. This is the mine plan of operations which THEMAC describes on its website.

4. BLM described a "No Action" Alternative in its DEIS, as required by law. (p. ES-7)

BLM describes its evaluation of the Proposed Action and Alternatives as:

"The Proposed Action was analyzed to adequately reflect the largest possible impact of the mining footprint at Copper Flat. At the conclusion of the EIS process, the MPO would be revised to accurately represent the Preferred Alternative selected by the BLM for the ROD." ES-4

As noted in BLM's Summary of Differences (p. ES-6) Alternative 2 (when compared with the Proposed Action); 1) increases the annual water use, 2) increases the total water uses over the life of the mine, and 3) power requirements increase (in this case, power from coal-fired electrical generation facilities). Even at the summary level, the Proposed Action does not "reflect the largest possible impact of the mining footprint at Copper Flat" - at the detail level, this discrepancy is even more obvious.

On page ES-9 of the DEIS, a table summarizing the impacts of the Proposed Action, Alternative 1, and Alternative 2 (the mining operation program described by THEMAC on its website as their plan of operation and the Alternative selected by BLM as its Preferred Alternative - see screen grab below from the [THEMAC website](http://themacresourcesgroup.com/copper_flat_mine) - http://themacresourcesgroup.com/copper_flat_mine - accessed on February 27, 2016).

■ MINING METRICS TABLE

Mine Life(years)	11.1
Strip Ratio(Waster:Ore Tons)	0.4:1
Lom annual processing rate(Ktons)	10,200
Copper equivalent annual production(Klbs)	74,000
Copper equivalent LOM production(Klbs)	819,000
Copper LOM annual production(Klbs)	57,000
Copper LOM production(Klbs)	628,000
Gold LOM annual production(Ktrozs)	20
Gold LOM production(ktrozs)	227
Copper equivalent LOM average grade	0.39%

The impacts are described only at a high level of summary: either Significant or Not Significant. The impacts are described for the Resources Areas identified in the report. The report does not provide data or analysis which would lead to the conclusions identified in this summary for most of the Resource Areas. The "No

Action" Alternative is not summarized in this table because BLM asserts that leaving the mine site as is has no impact in any of the Resource Areas. (p. ES-7) Pages 3-1 and 3-2 provide definitions for Significant and Not Significant.

Chapter 2 describes the Proposed Action and Alternatives 1 and 2. The description of mining operations in these three operational scenarios is adequate. Very general statements about the impacts on various Resource Areas are made in this chapter, in a number of instances these summary descriptions do not comport with findings elsewhere in the DEIS, are misleading, and/or suffer from errors of commission and omission. The No Action Alternative is not evaluated or even referenced.

The remainder of the report is dedicated to the assessment of the Resource Areas by BLM. There are serious concerns about the adequacy and accuracy of most of these assessments, those concerns will be addressed later.

The bulk of the analysis which BLM performed in each of the Resource Areas was premised on the Proposed Action. Their description of the differences between the analysis of the Proposed Action and the two Alternative Actions is limited to a paragraph or so. No assessment is made of the No Action Alternative.

This approach delivers a much different set of data, affects selected methodologies and analytic schemes, and arguably would lead to different conclusions than if the BLM had selected the mining plan of operations (Alternative 2) identified by THEMAC (and known to) BLM at the beginning of the process as the Proposed Action. This action was deliberate by BLM. The timing of submittals is such that there is no appropriate reason for the identification of a Proposed Action which did not meet the "reality test". (You know, the one that says if you are going to evaluate what someone is going to do you should evaluate what they are going to do - not something else.)

In their totality, the erroneously identified Proposed Action and Alternatives do not reflect a logical or likely set of options. Alternative 2, which should have been the identified Proposed Action is the most aggressive of all of the evaluated options. If it had properly been identified as the Proposed Action an additional (perhaps two) more aggressive option would have been identified and evaluated. The analysis performed in the DEIS would have been based on the the appropriate Proposed Action, the course of action identified as Alternative 2 in the DEIS. This analysis would have been performed using a different set of data and it would have delivered a different set of conclusions, across the board.

The decision made by BLM to not properly identify the Proposed Action results in a report which is deliberately skewed. It is not an appropriate assessment on which to make a decision on this topic. I have been denied the right, under statute, to review

a Draft Environmental Impact Statement which identifies the Proposed Action and a set of viable alternatives by this action. In such cases, the Proposed Action is the action which is known to be the plan of operations of the project.

COMMENTS ON THE ASSESSMENT OF SURFACE AND GROUND WATER IMPACTS

The Canadian firm, THEMAC Resources Group Ltd, doing business as the New Mexico Copper Corporation proposes to use 1,238,885,502 (1.2 billion) gallons of fresh ground water every year to support its mining operations, known as the Copper Flat Copper Mine (p. 2-27, Table 2-11). The Bureau of Land Management proposes instead that it use 1,989,320,350 (2 billion) gallons of fresh water a year for its operations (p. 2-84, Table 2-30). As noted above the use of larger amounts of water on an annual basis is the Preferred Alternative presented by BLM and the stated course of operations by THEMAC, it is identified as Alternative 2 in the DEIS - it is not identified as the Proposed Action. As stated above, the alternatives were treated to only the most cursory analysis and the results of that analysis were not substantively discussed in the main body of the report. Thus denying the public an opportunity to appropriately evaluate the (real) Proposed Action.

According to the Canadian firm, the mining operations will require roughly 4 times the amount of fresh water described in the Proposed Action for its operations. THEMAC asserts that the difference (total water requirement minus fresh water) will be derived from several other sources, sources like the recovery of water from the tailings storage facility (p. 2-76). THEMAC asserts that it will be able to recovery 2,963,940,696 (3 billion) gallons of water from the tailings storage facility every year and reuse that water in its operations. (p. 2-27) Under the Preferred Alternative identified by the Bureau of Land Management (Alternative 2 in the report - and the real Proposed Action), THEMAC would have to recover 5,051,993,904 (5 billion) gallons of water a year for use in its operations (p. 2-84). The assertion that THEMAC can successfully recycle these amounts of water is fundamentally unproven, not adequately analyzed, and not discussed in the main body of the report (in part, because it was not the amount of water given the greatest amount of scrutiny - the analysis, to the extent that it exists, was performed on the lower amount of water because that was the amount identified for the Proposed Action in the report). Any shortfall in meeting these recycling goals will have to be made up with fresh water and will fundamentally effect surface and ground water supplies.

Even at the lowest projected fresh water use rates, the Bureau of Land Management finds that both Surface Water Use and Groundwater Resources will be adversely affected a "significant" amount. (p. ES-9) "Impacts to the regional water budget, including flows of the Rio Grande, would be significant. These impacts would be large in magnitude, long-term, and certain. Water budget impacts would begin to

reduce once mining ends." (p. 3 - 96). Even after 100 years the reduced flow created by the mine would be 11,730,636 gallons a year. (3 - 83)

Over the 16 years of expected mine operations in the reports Proposed Action (p. 2 - 5), THEMAC projects a use of 19,641,646,578 (19.6 billion) gallons of fresh water. Alternative 2, which is the the BLM Preferred Alternative, and the Real Proposed Action 22,887,448,389 (22.9 billion) gallons of fresh water would be used (p. 3 - 27) during the 11 years the mine would operate (p. 2 -71). (It is unclear what the duration of mining operations are under the BLM proposal since it is variously reported as 11 years and 12 years (p. 2 - 72). The effects of using 22.9 billion gallons of water are not adequately assessed because of the fundamental flaw in methodology employed by BLM in its analysis (it is the lower amount of usage which received the "definitive" assessment and is discussed in the main body of the report).

Of significant importance is the assertion in the draft EIS that the aquifers will recharge in a fairly short period of time. At page 3 -14 the Bureau of Land Management asserts that "It is unlikely that global climate will change dramatically enough over the life of the project (approximately 16 years) to impact project activities." It is possible that this statement is true, the mining activities may not be affected by climate change phenomena. However, the effect of those climate changes, especially given the mining activities proposed by THEMAC, on a broad spectrum of EIS evaluation criteria may be extreme.

ALL FOOTNOTES ARE SUPPORTED BY FULL DOCUMENTATION IN THE APPENDIX TO MY COMMENTS. THE APPENDIX IS PROVIDED ONLY IN THE ELECTRONIC COPY OF THESE COMMENTS.

The recharge of the aquifers projected in the EIS is based on recent historical (straight-line) averages. This type of assessment has been roundly criticized in scientific literature for quite some time, see, for example "*Stationarity is Dead*" - Long Live Transformation: Five Principles For Climate Change Adaption Law; Robin Kundis Craig, Associate Dean for Environmental Programs, Florida State University College of Law; published in Vol. 34 **Harvard Environmental Law Review**, 9, 2010, pp. 9 - 73.¹ Dr. Julio Betancourt (Adjunct Professor, at the Department of Geosciences, University of Arizona and Senior Scientist, Branch of Regional Research, Water Mission Area of the USGS, and the recipient of numerous Federal and Private awards - cv available at www.paztcn.wr.usgs.gov/julio_cv.html) clearly articulated the clear methodological errors of straight line averages in various works including "*Stationarity is Dead; Whither Water Management?*" published in **Science**, Volume 319, pp 573-574, February 1, 2008.² Cook, Ault, and Smerdon published their findings about the recharge potential in the southwest in "*Unprecedented 21st Century Drought Risk In the American Southwest and Central Plains*" published in **Science Advances** (American Association for the Advancement of Science) on February 12, 2015³. The

methodology which they use is typical of that which should be used in an analysis of this nature and application of this more appropriate methodology would result in markedly different results. If a more scientifically accurate assessment methodology were used, the negative impacts of mining operations on surface water and ground water would be significantly greater because the potential for recharge is so much less than that projected in the DEIS. These impacts will aggravate the negative economic impacts of the mine (something which the DEIS glosses over), namely the potential reduction of property values (because water supplies become more problematic), reduced revenue from property taxes for the county, and out migration of the more affluent members of the population (because they can).

In "The Impact of Climate Change on New Mexico's Water Supply and Ability to Manage Water Resources", July 2006 ⁴ the New Mexico Office of State Engineer and the New Mexico Interstate Stream Commission found that "The impacts to the State" (created by Climate Change) "are anticipated to be significant for water managers and users, with changes to both supply and demand including: ...changes in snowpack elevations and water equivalency...changes in available water volumes and in the timing of water availability...increasing precipitation in the form of rain rather than snow due to increasing temperatures...etc." (p. iv) None of these impacts are noted in the DEIS, all of these impacts will effect both the runoff and recharge of the aquifer.

At page 6 this report notes that "The recent observed decrease in snowpack in the Southwest has coincided with the warming trend. Climate models predict that snowpack in the Southern Rocky Mountains will continue to decline through the 21st Century." Snowpack is a major source of aquifer recharge. Not only will aquifers in this area not recharge as quickly as in the past, perhaps not recharging at all, following the drawdown by the proposed Copper Flat Mine, the activities of the subject project will aggravate climate change increasing the problem.

Increases in temperature will overwhelm any possible increase in precipitation. "The Impact of Climate..." (above) report notes (page 6) that a "7° (F) increase in temperature will require precipitation increases of 15 - 20% of current averages to mitigate the decrease in flows experienced from evaporative losses (Nash and Gleick, 1993). Additional research has also shown that increases in precipitation along with increased temperatures can result in decreases in runoff [Wolock and McCabe, 1999]." Even at substantially lower temperature increases the problem becomes insurmountable. Aquifer recharge and stability is becoming more and more problematic, even without a significant drawdown of the aquifer by a project like the Copper Flat Mine. The analysis contained in the DEIS is simply wrong, bad data, bad analysis, wrong conclusions.

In any proper assessment of a set of possible scenarios there is an analysis which includes probability curves (commonly referred to as "bell curves"). The most likely scenario is identified as that which is at the top of the probability curve. Less likely scenarios are identified by the "legs" of the bell curve, extended to the left and right of the most likely scenario. In the subject case, the most likely scenario, that aquifer recharge will be problematic in the future, certainly "irretrievable" and perhaps "irreversible" is found at the top of the bell curve. Scenarios in which everything is "just fine" are way out on the long legs of the probability curve. Yet it is one of these, drawn from the least likely set of scenarios, which the DEIS has selected as the anticipated outcome of mining operations at Copper Flat. This is reckless, capricious, and arbitrary.

These major errors of commission (in the methodology) and omission (failure to adequately consider the full range of negative economic impacts) result in an DEIS which is fundamentally flawed. Because these errors are so fundamental the Draft EIS should be withdrawn and reworked.

COMMENTS ON THE EFFECT OF THE PROPOSED PROJECT ON THE LOCAL ENVIRONMENT

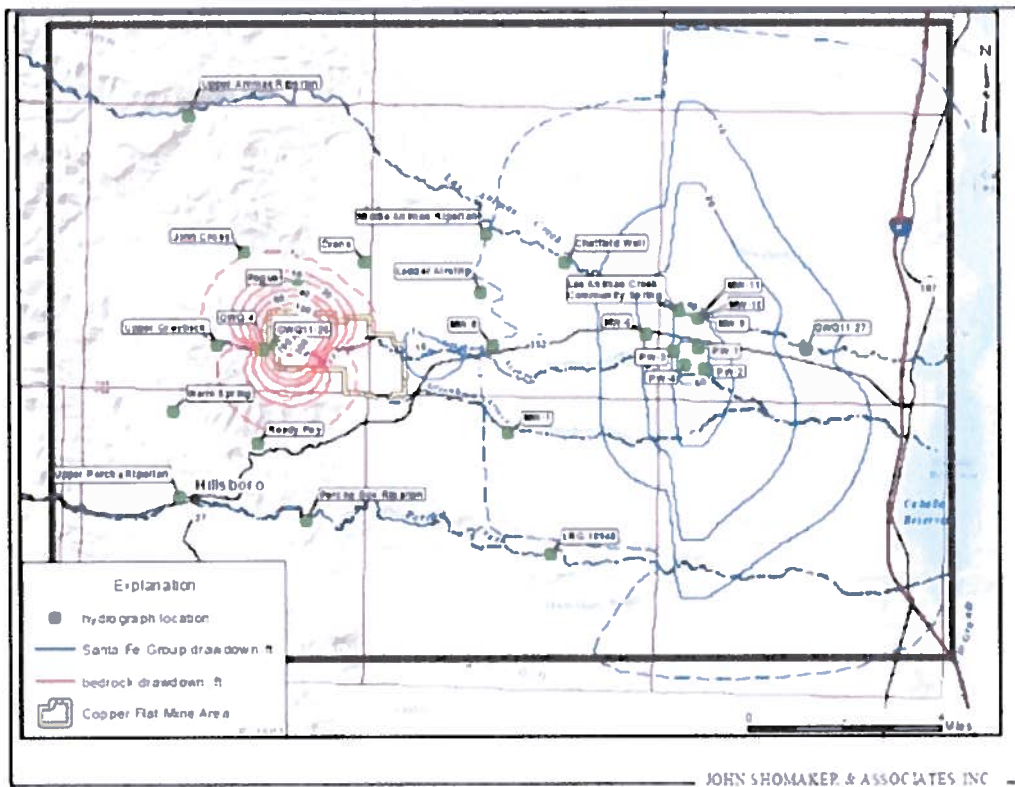
If you were to ask most of the people of the Rio Grande Valley what makes Hillsboro and the Animas Creek drainage so special, the answer would be "the trees". Our trees are what sets us apart from the rest of the area and most would argue that it is only the trees that set us apart. Some of us, in our hubris, might argue that we are part of the formula, but that is probably not accurate, people come to these areas of the Black Range because it is different from what they see out of their window every day not because of the people who live here.

The beauty of green trees suddenly emerging from the arid plain is breathtaking sometimes, the beauty of the fall colors in the Animas can be just as striking. But these trees live a tenuous life. Water, precious clean water, is in short supply in this area and the trees hang on only because they are able to reach it with their roots.

The Canadian firm, THEMAC, proposes to lower our water table significantly. It is quite likely their actions will kill our trees, especially those in the Animas.

In Alternative 2, the BLM preferred Alternative and the actual plan of operations identified by THEMAC, the BLM conservatively predicts that the water table in parts of the lower Animas will drop by at least 40' (in areas nearby, 60') as a result of THEMAC operations. (See Figure 3-19b, below, from the Draft EIS conducted by BLM, p. 3 - 92.) In the original proposal by THEMAC (they quickly changed there plans to that described in Alternative 2 - a cute bit of card play), the drawdown is not as dramatic, being only 20' and 40' respectively, but arguably just as damaging.

Figure 3-19b. Map of Water Level Declines in Layer 2 at End of Mining – Alternative 2



Source: JSAI 2015.

The BLM estimate of drawdown (in both the proposed action and the alternate actions involving mining) is extremely conservative because of flaws in the methodology used to calculate the damage.

THEMAC argues that the surface water of the Animas drainage is isolated from the Santa Fe aquifer by "a shallow clay layer that serves as a perching horizon that would isolate flows in Las Animas Creek from effects of pumping of the mine supply wells." (p. 3 - 63) This is a definite statement, as statements favorable to the mine operations are, throughout the report. Statements that are unfavorable to mining operations tend to be phrased in terms of "may" or "might", much less definite. The quality of the source data does not, however, appear to be different in the two situations (where favorable or unfavorable conclusions are reached), indicating systemic bias in the analysis. Please note, that this, in itself, does not indicate that the analysis reaches incorrect conclusions, except as noted elsewhere in these comments. It only indicates that the analysis is not rigorous, not as definitive as it claims to be in many places, and requires substantial testing to correct errors created by the obvious bias.

Even if the statement made by BLM about the presence of a clay layer creating a perched horizon (for the entire lower Animas) is correct, it is a great leap of faith to argue that it is isolated from the Santa Fe aquifer during, and following, mining operations. Permeability is a function of relative pressure gradients. When the Santa Fe aquifer is lowered by 60' in the Animas Creek basin the ground water will be more likely to penetrate the ill-defined clay layers and flow directly into the Santa Fe aquifer than is the case currently. This will not affect the aquifer very much but it will dewater the Animas Creek basin and kill the trees.

Unfortunately, even within the BLM analysis construct, this is not the complete story. The BLM analysis indicates an additional lowering of the water table when the well owners in the Animas are forced to pump water, because of the drawdown, to maintain their current usage. (Figure 3 - 19c, p. 3 -93)

I believe that a thoughtful fact-based discussion of the proposed operation would be useful to the community. Unfortunately, the DEIS denies the community the opportunity for such a discussion because of its inherent bias. Making assertions does not make them fact, this is a fundamental truth that the BLM seems to have overlooked in this document. In basing its analysis on unproved assertions BLM has denied me the opportunity to review a fact-based DEIS.

The change of the tree colors as the seasons pass are an inherent part of the beauty of this area. This area of the Animas will be significantly harmed by Copper Flat Mining operations. A number of experts believe the trees will die as a result of the proposed mine operations.

COMMENTS ON THE ASSESSMENT OF SOCIOECONOMIC IMPACTS (3.22)

In one sense, the decision about the Copper Flats Copper Mine is very simple, does BLM want to impose:

1. The Mine Option: A short-term boom and bust economy over a period of twelve years followed by an economy which is less robust and stable than it is presently; or
2. The Long-Term Viability Option: Long-term, stable growth, based on prudent actions and maintaining the natural environment which has been the basis of an economy in which "the annual per capita income in Sierra County grew almost 30% faster than the State overall" (p. 3 - 241 & Table 3-61).

The rather astounding increase in per capita income in Sierra County documented by BLM in its DEIS is cause for celebration. At long last, we are beginning to pull

ourselves from the bottom. And the emphasis is on "we", because this increase is despite the efforts of the County Government which have created an outflow of monies from the County (see Spaceport America discussion below). After documenting the increase in per capita income the BLM then makes a series of "interesting" determinations and reaches even more "interesting" conclusions. None of which appear to be able to stand up to any kind of scrutiny, simply making an assertion does not make it fact. And the onus is on BLM to demonstrate that at least some of their wild assertions are factual.

The DEIS states that the main economic drivers in Sierra County are "agriculture, healthcare, and tourism" (p. 3 - 241), completely ignoring the large and stable inflow of wealth into the county associated with the large, and growing, retirement community - arguably the driver of that growth in per capita income noted above. There has been an influx of retirees who are "well-heeled", they spend a lot of money in the county (increasing the wealth of other county residents and increasing the tax revenue of the county). In addition, their homes create new property tax income for the county (and property taxes which are greater than the county average). Suspiciously, the median value of owner-occupied housing units in the Hillsboro area are listed as "n/a" (p. 3 - 238, Table 3-57 "Housing Characteristics"). That data is, of course, easily accessible through the Sierra County Tax Office. At the BLM hosted meeting in Hillsboro, on December 16, 2015, it was noted by public presenters that the use of narrowly defined CDP's (Census Designated Place) are used in the report to exclude homes, businesses, and citizens who are located in the proximity of the mine (i.e., the 88042 zip code) from the analysis. It goes without saying, perhaps, that the effective disenfranchisement (the term used by presenters from the public at the referenced meeting) of these people and their economic activities supports an analysis favorable to BLM's preferred Alternative. This change in county economic demographics is completely ignored by the BLM in its assessment, creating a data base which is significantly incomplete. The resulting analysis and conclusions reached on the basis of the data actually included in the DEIS and analysis which flows from it is simply wrong. A house built on sand can not stand.

Instead, the DEIS attributes the growth to things like Spaceport America. In an assessment which, in large part, appears to be taken from one of Spaceport America's press releases, the impression is left that Spaceport America has been a positive economic driver for Sierra County, going so far as to quote the conclusions of future employment and expenditures included in the Final EIS for Spaceport America as evidence of economic growth (p. 3 - 242) (in case you missed the point - this DEIS uses predictions in the Final EIS for Spaceport America as evidence of economic growth - only one problem, those predictions have not panned out, and it is readily apparent and easily discernible that they have not). Parties which have less self-interest in the Spaceport (entities like the major media outlets in New Mexico, the industry group Parabolic Arc, and scores of public officials] are extremely concerned

about the economic drain on Sierra County and the State of New Mexico (where bills to sell the facility because of its economic drain have been introduced in the State Senate). In excess of \$142,000,000 in public funds have been spent on the Spaceport, much from a special gross receipts tax on the residents of Sierra County. The DEIS treats those funds as economic growth, those funds were not new money, they were redirected money. Redirected out of the pockets of Sierra County residents and into the pockets of contractors from outside the county, to support the activities of the very rich. Continuing expenditures, like \$9,000,000 to the Florida company IDEAS drain wealth from Sierra County. The facility is currently running a \$500,000 a year deficit, which is covered entirely by tax funds. The long-term outlook for the facility is dismal with better situated facilities built at the; Mojave Air and Space Port (www.mojaveairport.com); Spaceport Sweden (www.spaceportsweden.com); Mid-Atlantic Regional Spaceport (www.vaspace.org); Midland International Air & Space Port (www.midlandinternational.com); the British Commercial Spaceport; the Caribbean Spaceport (www.caribbeanspaceport.com); Cecil Field in Jacksonville, Florida; the Oklahoma Space Industry Development Authority (www.airspaceportok.com); and many others - Wikipedia lists more than 30 spaceports (not all of which are commercial, but could be). This example is given more space than it might otherwise be due because it is an example of the type of economic analysis which is present in the DEIS. Furthermore, Spaceport America did not even make the list of the county's 10 largest employers (p. 3 - 239) in the report. (Note, however, that it is unclear what the data set is for the 10 largest employers list, it may be Census Bureau data from 2007, Census Bureau data from the census of 2010, or from some other data set - simply another example of sloppy work in the report.)

Table 3 - 55, "Distribution of Population by Age" (p. 3 - 236) demonstrates the changing economy of Sierra County and especially the region near the mine (the 88042 zip code area). The economy has been shifting away from, and continues to shift away from, one driven by the cattle industry to one which is driven by the influx of retirees, people who are settling in the area because of its unspoiled natural setting. This change is extremely positive, creating an economy which is; stable in its source of wealth, effectively insulated from general economic swings, and which on a per capita income basis is greater than the rest of Sierra County and the State of New Mexico. Table 3 - 55 lists the percent of population older than 65 as 45.22% in the Hillsboro CDP (again a very narrowly defined area). The implicit notation in the report is that such a population is negative, when in fact it clearly demonstrates the economic shift in the area, a shift to a stable, affluent population which is effectively insulated from the whims of the general economy.

The economic stability and viability of the Hillsboro and Animas Creek areas is greater than the rest of Sierra County and most of the rest of New Mexico. This stability and viability is in grave danger of disappearing, however. The negative

impacts of the mining operations on the environmental attributes that the retirement community cherish will destabilize this economic stability and viability and will have long lasting economic consequences.

Just when Sierra County is beginning to gain its economic footing, the underpinnings of that trend are swept away as if by a flash flood, property values diminish - reducing county tax revenues, people who came to the area because of its beauty will leave - taking their contributions to the county and business coffers with them, and I suspect they will not come back.

COMMENTS ON THE REVENUE STREAM DERIVED BY SIERRA COUNTY FROM THE PROPOSED MINE

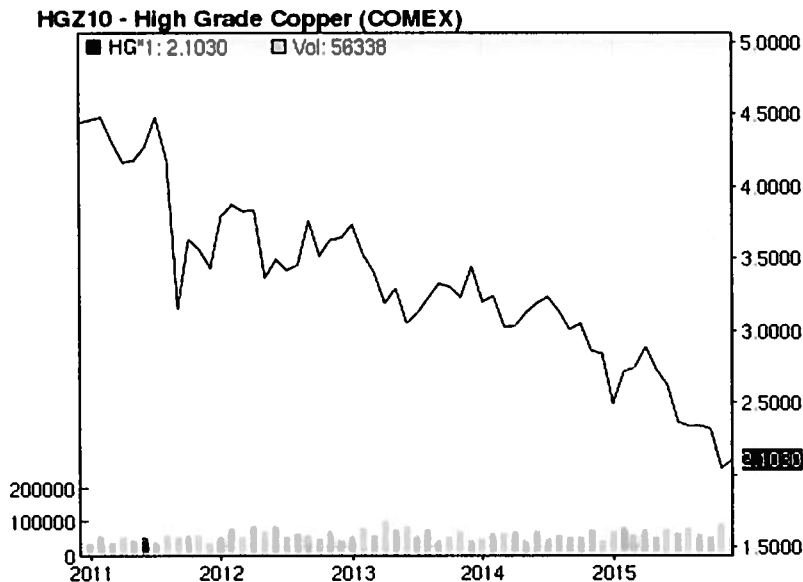
At p 3-243 of the DEIS it is argued that the Copper Flat Mine will be subject to the processors tax but exempt from the resources tax because the ore would be processed in New Mexico - in the Hillsboro meeting on December 16, 2015, however, it was acknowledged that the ore will probably be processed outside of New Mexico. The DEIS analysis of tax revenue from the mine is, therefore, erroneous.

Property tax is due during periods when the mine is not operating, it is replaced during periods of operation by an ad valorem tax based on gross value of production. (p 3 - 244). The copper ad valorem tax is imposed on active copper production in lieu of the property tax, and is levied on the value of the mine and all real and personal property. Property tax and ad valorem tax revenue is added to the Copper Production Tax Fund which is distributed to taxing authorities by the state and the counties. At 3-245 the taxable value of copper production is listed, not the actual taxes paid, giving an erroneous impression of benefit.

At some point, this type of continuing misrepresentation of the benefits derived from the projected mine operations gets bothersome. It is very difficult to believe, that in its totality, this misrepresentation and obfuscation is accidental.

COMMENTS ON THE REVENUE STREAM DERIVED BY SIERRA COUNTY AND THE STATE OF NEW MEXICO FROM THE PROPOSED MINE

Copper is a commodity. This is a fact. The implications of this fact are not addressed, in any form in the DEIS. All tax revenues generated by the mine operations are



treated as additive (to the coffers of the county and state) in the report. That is not how tax revenues from commodities work. Currently, in southern New Mexico, there are two large copper mining operations. Their production affects the price of copper (and thus any revenue stream generated from their operations). Increases in copper production in the state will decrease

the per unit revenue generated by copper production because the price of copper will drop. Thus, an increase in copper production, at the Copper Flat Mine will decrease the revenue from each unit of copper produced because the price of copper will drop (commodities are very responsive to supply and demand curves). It is certain that the revenue made available to Sierra and Luna Counties will diminish because of Copper Flat mine production. It is uncertain what the effect will be on State Revenues. It is improbable that they will increase if a third mine begins operations in the state. It is probable that the revenues will remain roughly the same, and possible that they will actually diminish. (This because the coppers future market is driven by perception as much as actual production.) There is no analysis of this phenomenon in the DEIS.

COMMENTS ON THE APPROPRIATENESS OF THE REGION OF INFLUENCE DETERMINATION

At page 3-235 the DEIS states "Since potential impacts with the greatest magnitude, duration, extent, and likelihood would occur in Sierra County, it is therefore defined as the Region of Influence (ROI) for the analysis of socioeconomic impacts. Impacts that extend outside of the ROI are discussed where applicable throughout the section".

As noted directly above, Grant and Luna counties are likely to suffer negative economic impacts as a result of the operations of the proposed Copper Flat Mine. Failure to address, these negative impacts and failure to include these counties in the Region of Influence effectively disenfranchises the citizens of those counties from commenting on the DEIS. They simply were ignored in any substantive public

outreach efforts. In addition, because the economic effects of the three mines is integrated the economic analysis of the Copper Flat mine operations is fundamentally flawed.

The concept of ROI is not addressed in the water rights sections of this report. Diminishment of the water flow from the Percha and Animas drainages adversely affects all downstream users of water in the Rio Grande. This diminishment will have direct, and perhaps a very substantial negative effect, on the livelihood of those individuals. Again, this issue is not addressed in the DEIS and those individuals were not a target audience in any public outreach efforts.

SUMMARY

The BLM has denied me the opportunity to review the plan of operations of the Copper Flat Copper Mine and its implications. They have done so by performing an analysis of a plan of operations which they knew was not the actual plan of operations identified by the operator of the Cooper Flat Mine. The Proposed Plan should have reflected the known operating plan of the Copper Flat Mine, not what they submitted at the very beginning of the process, but the one that they publicly identified elsewhere (in roughly the same timeframe). The base analysis should have been made on the real plan of operations since that is the most extreme case and alternatives to that extreme should have been identified. None of this was done. The DEIS does not analyze the mining operations which the BLM knew, or should have known, were actually planned by the operator.

I spent my working life in the Federal Service, heavily involved in policy making, analysis, and public outreach. I am personally embarrassed by this DEIS.



Robert Barnes
Hillsboro, New Mexico
February 29, 2016